

## Title

Ayurveda and Lifestyle Modification: Research to Practice

## Abstract

The global burden of non-communicable diseases is rapidly increasing, and the essential management strategy is to follow a healthy lifestyle. Ayurveda can play a major role in this aspect, as the primary aim of Ayurveda is to prevent diseases by following a healthy lifestyle. However, in order to implement such classical knowledge (that is, healthy lifestyle based on Ayurvedic principles) into real practice, a systematic process needs to be followed. This systematic process must include robust research studies (that is, development and evaluation of Ayurveda-based lifestyle intervention) and behaviour change of people. This paper describes these two important steps in detail. In conclusion, there is a huge scope of implementing classical Ayurvedic knowledge into real practice, which will be beneficial to all of society.

## Key words

Ayurveda, healthy lifestyle, research, behaviour change

## Introduction

Globally, there is a huge burden of non-communicable diseases (NCDs), such as cardiovascular diseases, cancers, respiratory diseases and diabetes. Around 55% of all cause disability-adjusted life years (DALYs)<sup>1a</sup>, a summary measure to indicate the overall burden of disease and includes mortality as well as morbidity, are due to NCDs.<sup>1</sup> Modifiable lifestyle factors, such as physical inactivity and unhealthy diets, are some of the important risk factors of NCDs and thus, the essential management strategy is to follow a healthy lifestyle, including diet.<sup>2</sup> However, the conventional or western care model has its own limitations in terms of its effectiveness, safety, affordability and acceptability.<sup>3</sup> Ayurveda, a system of medicine that originated in the Indian subcontinent, can play a major role in this aspect. The primary aim of Ayurveda is to prevent diseases by following a healthy lifestyle.<sup>4</sup> Ayurvedic approach to a healthy lifestyle includes dinacharya (day-time regimen), ratricharya (night-time regimen) and ritucharya (seasonal regimen), and these have been described in detail in various classical Ayurvedic texts (such as texts written by Charaka (400-200 BC), Sushruta (400-200 BC) and Vagbhatt (600-500 BC)).<sup>4-6</sup> However, in order to implement such classical knowledge (that is, healthy lifestyle based on Ayurvedic principles) into real practice, a systematic process needs to be followed. This systematic process must include robust research studies and behaviour change of people.

### Step one: Development and evaluation of Ayurveda-based lifestyle intervention

The evidence-base of Ayurveda related studies is extremely poor, which is either due to non-existence of research studies or poorly conducted research studies.<sup>7</sup> The first step should be to develop an Ayurveda-based lifestyle intervention and then, to evaluate its effectiveness, safety, affordability and acceptability. Globally, the United Kingdom Medical Research Council's guideline is used for development and evaluation of complex interventions.<sup>8</sup> This guideline should be used to develop and evaluate Ayurveda-based lifestyle interventions, which are considered to be complex. It should be noted that this is an iterative process, as shown in Figure 1, and mixed methods approach (quantitative (including economic evaluation) as well as qualitative) should be used.<sup>8</sup> Apart from this guideline, many internationally recognised checklists, to report research studies, are available which could be used to design such studies, such as the Consolidated Standards Of Reporting Trials (CONSORT) 2010 (includes a specific

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<sup>a</sup> One DALY represents the loss of the equivalent of one year of full health.<sup>1</sup>

checklist for herbal medicines) and Drummond's checklist for assessing economic evaluation studies.<sup>9-14</sup>

## **Step two: Behaviour change**

The availability of a lifestyle intervention and providing health education are not enough to bring the desired outcomes in people.<sup>15,16</sup> Once the Ayurveda-based lifestyle intervention is developed and is found to be effective, safe, affordable and acceptable, then this intervention needs to be implemented in real practice through the behaviour change of people. A behaviour emerges from the interaction between three necessary conditions: capability (psychological or physical ability to enact the behaviour), motivation (reflective and automatic mechanisms that activate or inhibit the behaviour) and opportunity (physical and social environment that enables the behaviour).<sup>17,18</sup> The behaviour change process helps an individual to transit from an unhealthy lifestyle to a healthy lifestyle and to adhere to the healthy lifestyle in the longer term.<sup>15,16</sup> The established behaviour change techniques (BCTs), such as information provision, exploration and reinforcement of motivation to change, goal setting, action planning, coping plans, and relapse prevention, should be used for this purpose.<sup>16</sup> The selection and application of any additional BCT should be based on the behavioural analysis, that is, by understanding the target behaviour.<sup>17,18</sup> The main questions involved in this process are: why the desired behaviour is not occurring and what needs to change for the desired behaviour to occur? The theoretical domains framework (TDF), as shown in Figure 2, can help to understand the target behaviour and answer these questions.<sup>17,18</sup>

## **Conclusion**

There is a huge scope of implementing classical knowledge (that is, healthy lifestyle based on Ayurvedic principles) into real practice, which will be beneficial to all of society. This implementation of classical Ayurvedic knowledge should follow a systematic process, which must include robust research studies and behaviour change of people.

## **Conflict of interest**

None

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Figure 1: Key elements of the development and evaluation process<sup>8</sup>

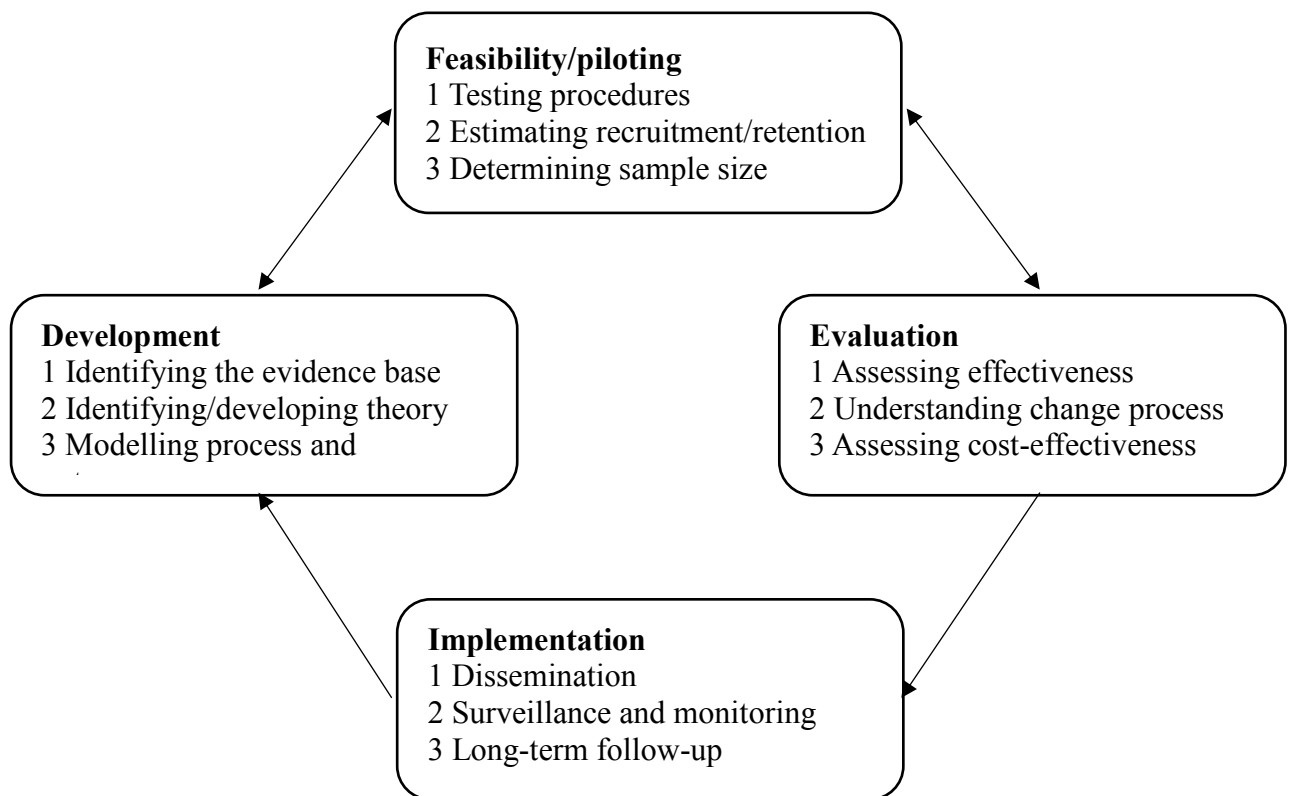


Figure 2: Theoretical domains framework<sup>18</sup>



Sources of behaviour

TDF domains

Soc	Social influences
Env	Environmental context and resources
Id	Social/professional role and identity
Bel Cap	Beliefs about capabilities
Opt	Optimism
Int	Intentions
Goals	Goals
Bel Cons	Beliefs about consequences
Reinf	Reinforcement
Em	Emotion
Know	Knowledge
Cog	Cognitive and interpersonal skills
Mem	Memory, attention and decision processes
Beh Reg	Behavioural regulation
Phys	Physical skills